

**APPARATUS AND METHOD FOR DIE PLACEMENT
USING TRANSPARENT PLATE WITH FIDUCIALS**

ABSTRACT OF THE DISCLOSURE

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10 A transparent plate with fiducials for aligning and placing of dies on a panel with a high degree of accuracy is disclosed. The locations of the fiducials correspond to desired die locations. The transparent plate is arranged beneath the panel, with the fiducials aligned with cavities formed in the panel. The cavities have transparent bottoms. A die alignment mark on a die residing over the panel is used to establish the position of the die. Imaging a fiducial associated with a cavity is used to center the die with respect to the cavity. Accurate placement of the fiducials is accomplished by electron-beam lithography.

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